AMENDMENTS TO THE CLAIMS

1. (Previously presented) An automatic transmission comprising:

a first axis for inputting power,

a second axis for outputting a driving force source,

at least one first gear group which consists of a drive gear fixed on said first axis, and a driven gear provided so as to engage or run idle with respect to said second axis while engaged with said drive gear,

at least one second gear group which consists of a driven gear fixed on said second axis, and a drive gear provided so as to engage or run idle with respect to said first axis while engaged with said driven gear, and

a torque transferring mechanism for transfering torque between said driven gear which can run idle with respect to said second axis and said driven gear fixed on said second axis.

2. (Currently amended) An automatic transmission comprising:

a first axis for inputting power,

a second axis for outputting a driving force source,

at least one first gear group which consists of a drive gear fixed on said first axis, and a driven gear provided so as to engage or run idle with respect to said second axis while engaged with said drive gear,

at least one second gear group which consists of a driven gear fixed on said second axis, and a drive gear

provided so as to engage or run idle with respect to said first axis while engaged with said driven gear, and

a torque transferring mechanism ~~provided~~ for transferring torque between said driven gear of said first gear group which can run idle with respect to said second axis, and said driven gear of said second gear group which is fixed on said second axis,

wherein the torque is transferred from said first axis to said second axis with said torque transferring mechanism.

cmt. C'

3. (Currently amended) An automatic transmission comprising:

a first axis for inputting power,

a second axis for outputting a driving force source,

at least one first gear group which consists of a drive gear fixed on said first axis, and a driven gear provided so as to engage or run idle with respect to said second axis while engaged with said drive gear,

at least one second gear group which consists of a driven gear fixed on said second axis, and a drive gear provided so as to engage or run idle with respect to said first axis while engaged with said driven gear,

wherein shifting is performed by switching a torque transferring mode from one mode, such that the torque is transferred from said first axis to said second axis with said first gear group or said second gear group, to the other mode, such that the torque is transferred from said first axis to said

second axis with another first gear group different from said first gear group used in the former transferring mode or another second gear group different from said second gear group used in the former transferring mode, and

a torque transferring mechanism for transferring torque provided between said driven gear of said first gear group which can run idle with respect to said second axis, and said driven gear of said second gear group which is fixed on said second axis,

wherein the torque is transferred from said first axis to said second axis with said torque transferring mechanism while shifting.

cont. C'

4. (Previously presented) An automatic transmission according to any one of claims 1, 2 and 3, wherein said torque transferring mechanism comprises:

a first gear engaged with said driven gear which can run idle with respect to said second axis,

a second gear engaged with said driven gear fixed to said second axis, and

a torque transferring means for transferring the torque between said first gear and said second gear.

5. (Previously presented) An automatic transmission according to claim 4, wherein the first gear engaged with said driven gear which can run idle with respect to said second axis, the second gear engaged with said driven gear fixed to said

second axis, and the torque transferring means for transferring the torque between said first gear and said second gear in said torque transferring mechanism, are provided on another axis different from said first axis and said second axis.

6. (Previously presented) An automatic transmission according to any one of claims 1 to 3, wherein a torque ratio transferred from said first axis to said second axis by said first gear group, said torque transferring mechanism and said second gear group is one or more.

cont. C1

7. (Withdrawn) An automatic transmission according to any one of claims 1 to 3, wherein the gear engaged with one of said drive gears fixed to said first axis is provided on another axis different from said first axis and said second axis,

further comprising a motor generator for driving and regenerating, and a torque transferring mechanism for adjusting the torque transfer between said gear and said motor generator.

8. (Original) An automatic transmission according to any one of claims 1, 2 and 3, wherein said torque transferring mechanism comprises a friction type clutch.

9. (Previously presented) An automatic transmission according to claim 8, wherein a lubricant for said friction clutch is provided independently of a lubricant for said transmission.

10. (Withdrawn) An automatic transmission according to claim 7, wherein a motor engaged with said transmission is started by said motor generator.

11. (Withdrawn) An automatic transmission according to claim 7, wherein the driving force source of said motor generator is transferred to said second axis while shifting.

12. (Withdrawn) An automatic transmission according to any one of claims 1 to 3, further comprising

cont. C1

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

13. (Withdrawn) An automatic transmission according to claim 12, wherein the torque generated by said motor generator is transferred to said wheels by said transferring mechanism while shifting, and the torque is added to said wheels.

14-16. (Canceled)

17. (Previously presented) An automatic transmission comprising:

a first axis for inputting power,

a second axis for outputting a driving force source,

at least one first gear group which consists of a drive gear fixed on said first axis, and a driven gear provided so as to engage or run idle with respect to said second axis while engaged with said drive gear,

at least one second gear group which consists of a driven gear fixed on said second axis, and a drive gear provided so as to engage or run idle with respect to said first axis while engaged with said driven gear,

a torque transferring mechanism for transferring torque between said driven gear which can run idle with respect to said second axis and said driven gear fixed on said second axis,

cont. C1

wherein when said driven gear of said first gear group runs idle, the torque is transferred from said first axis to said second axis through a driven gear which runs idle with respect to said drive gear of said first gear group, said torque transferring mechanism, and a driven gear of said second gear group, and when said driven gear of said first gear group is engaged to the second axis, the torque is transferred from said first axis to said second axis through the driven gear engaged to said drive gear of said first gear group.

18. (Previously presented) A vehicle which includes an automatic transmission comprising:

a first axis for inputting power,

a second axis for outputting a driving force source,

at least one first gear group which consists of

a drive gear fixed on said first axis, and a driven gear provided so as to engage or run idle with respect to said second axis while engaged with said drive gear,

at least one second gear group which consists of a driven gear fixed on said second axis, and a drive gear provided so as to engage or run idle with respect to said first axis while engaged with said driven gear,

wherein the shifting is done by switching from torque transfer from said first axis to said second axis by said first gear group or said second gear group to torque transfer from said first axis to said second axis by at least one other first gear group or at least one other second gear group different from said at least one first gear group or said at least one second gear group, and

cont. C1

a torque transferring mechanism provided between one of said first gear groups and one of said second gear groups in said transmission, and a shifting control means for transferring torque from said first axis to said second axis by said torque transferring mechanism while shifting,

wherein an amount of back and forth acceleration change generated in said vehicle while shifting is controlled by said shifting control means so as to fall within 1.0 m/s^2.

19. (Original) A vehicle according to claim 18, wherein the back and forth accelaration generated in said vehicle while shifting is controlled by said shift control means so as to become more than 0.0 m/s^2.

20. (Previously presented) A vehicle which includes an automatic transmission comprising:

a first axis for inputting power,

a second axis for outputting a driving force source,

at least one first gear group which consists of a drive gear fixed on said first axis, and a driven gear provided so as to engage or run idle with respect to said second axis while engaged with said drive gear,

at least one or more second gear group which consists of a driven gear fixed on said second axis, and a drive gear provided so as to engage or run idle with respect to said first axis while engaged with said driven gear,

cont. C1

wherein shifting is done by switching from torque transfer from said first axis to said second axis by said first gear group or said second gear group to torque transfer from said first axis to said second axis by at least one other first gear group or at least one other second gear group different from said at least one first gear group or said at least one second gear group, and

a torque transferring mechanism provided between one of said first gear groups and one of said second gear groups in said transmission, and a control means for controlling the shifting by selecting a shifting system in which torque transfer from said first axis to said second axis is performed by said torque transferring mechanism while shifting or a shifting system in which said torque transferring mechanism is not used,

wherein an amount of back and forth accelaration change

generated in said vehicle while shifting is controlled by said control means so as to fall within 1.0 m/s^2.

21. (Previously presented) A vehicle according to claim 20, further comprising a motor which generates power introduced into said first axis,

wherein the torque is transferred from said first axis to said second axis by said torque transferring mechanism while shifting when the torque generated by said motor is more than a fixed value, and otherwise, the torque is not transferred from said first axis to said second axis by said torque transferring mechanism while shifting.

22. (Previously presented) A vehicle according to claim 20, further comprising a motor which generates power introduced into said first axis,

wherein the torque is transferred from said first axis to said second axis by said torque transferring mechanism while shifting when a throttle valve opening for adjusting the torque generated by said motor is more than a fixed value, and otherwise, the torque is not transferred from said first axis to said second axis by said torque transferring mechanism while shifting.

23. (Previously presented) An automatic transmission according to claim 4, wherein a torque ratio transferred from said first axis to said second axis by said first gear group,

said torque transferring mechanism and said second gear group is one or more.

24. (Previously presented) An automatic transmission according to claim 5, wherein a torque ratio transferred from said first axis to said second axis by said first gear group, said torque transferring mechanism and said second gear group is one or more.

25. (Withdrawn) An automatic transmission according to claim 4, wherein the gear engaged with one of said drive gears fixed to said first axis is provided on another axis different from said first axis and said second axis,

further comprising a motor generator for driving and regenerating, and a torque transferring mechanism for adjusting the torque transfer between said gear and said motor generator.

26. (Withdrawn) An automatic transmission according to claim 5, wherein the gear engaged with one of said drive gears fixed to said first axis is provided on another axis different from said first axis and said second axis,

further comprising a motor generator for driving and regenerating, and a torque transferring mechanism for adjusting the torque transfer between said gear and said motor generator.

27. (Withdrawn) An automatic transmission according to claim 6, wherein the gear engaged with one of said drive gears

fixed to said first axis is provided on another axis different from said first axis and said second axis,

further comprising a motor generator for driving and regenerating, and a torque transferring mechanism for adjusting the torque transfer between said gear and said motor generator.

28. (Withdrawn) An automatic transmission according to claim 23, wherein the gear engaged with one of said drive gears fixed to said first axis is provided on another axis different from said first axis and said second axis,

further comprising a motor generator for driving and regenerating, and a torque transferring mechanism for adjusting the torque transfer between said gear and said motor generator.

cont. C1

29. (Withdrawn) An automatic transmission according to claim 24, wherein the gear engaged with one of said drive gears fixed to said first axis is provided on another axis different from said first axis and said second axis,

further comprising a motor generator for driving and regenerating, and a torque transferring mechanism for adjusting the torque transfer between said gear and said motor generator.

30. (Withdrawn) An automatic transmission according to claim 25, wherein a motor engaged with said transmission is started by said motor generator.

31. (Withdrawn) An automatic transmission according to

claim 26, wherein a motor engaged with said transmission is started by said motor generator.

32. (Withdrawn) An automatic transmission according to claim 27, wherein a motor engaged with said transmission is started by said motor generator.

33. (Withdrawn) An automatic transmission according to claim 28, wherein a motor engaged with said transmission is started by said motor generator.

cont. C1

34. (Withdrawn) An automatic transmission according to claim 29, wherein a motor engaged with said transmission is started by said motor generator.

35. (Withdrawn) An automatic transmission according to claim 25, wherein the driving force source of said motor generator is transferred to said second axis while shifting.

36. (Withdrawn) An automatic transmission according to claim 26, wherein the driving force source of said motor generator is transferred to said second axis while shifting.

37. (Withdrawn) An automatic transmission according to claim 27, wherein the driving force source of said motor generator is transferred to said second axis while shifting.

38. (Withdrawn) An automatic transmission according to claim 28, wherein the driving force source of said motor generator is transferred to said second axis while shifting.

39. (Withdrawn) An automatic transmission according to claim 29, wherein the driving force source of said motor generator is transferred to said second axis while shifting.

40. (Withdrawn) An automatic transmission according to claim 4, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

41. (Withdrawn) An automatic transmission according to claim 5, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

42. (Withdrawn) An automatic transmission according to claim 6, further comprising

a motor generator for generating the driving force source

and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

43. (Withdrawn) An automatic transmission according to claim 7, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

cont. C'

44. (Withdrawn) An automatic transmission according to claim 8, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

45. (Withdrawn) An automatic transmission according to claim 9, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and

interrupting the torque.

46. (Withdrawn) An automatic transmission according to claim 10, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

cont. C1

47. (Withdrawn) An automatic transmission according to claim 23, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

48. (Withdrawn) An automatic transmission according to claim 24, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

49. (Withdrawn) An automatic transmission according to

claim 25, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

50. (Withdrawn) An automatic transmission according to claim 26, further comprising

cont. C1

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

51. (Withdrawn) An automatic transmission according to claim 27, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

52. (Withdrawn) An automatic transmission according to claim 28, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism

provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

53. (Withdrawn) An automatic transmission according to claim 29, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

cont. C1

54. (Withdrawn) An automatic transmission according to claim 30, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

55. (Withdrawn) An automatic transmission according to claim 31, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

56. (Withdrawn) An automatic transmission according to claim 32, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

57. (Withdrawn) An automatic transmission according to claim 33, further comprising

cont. C1

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

58. (Withdrawn) An automatic transmission according to claim 34, further comprising

a motor generator for generating the driving force source and regenerating the torque, and a transferring mechanism provided between wheels to which the torque of said transmission is not transferred and the motor generator, for transferring and interrupting the torque.

59. (Previously presented) An automatic transmission comprising:

a first axis for inputting power;

a second axis for outputting a driving force source;

at least one first gear group which consists of a drive gear fixed on said first axis, and a driven gear provided so as to engage or run idle with respect to said second axis while engaged with said drive gear;

at least one second gear group which contains a driven gear fixed on said second axis, and

a torque transferring mechanism for transferring torque between said driven gear which can run idle with respect to said second axis and said driven gear fixed to said second axis.

cont. C1

60. (Currently amended) An automatic transmission comprising:

a first axis for inputting power;

a second axis for outputting a driving force source;

at least one first gear group which consists of a drive gear fixed on said first axis, and a driven gear provided so as to engage or run idle with respect to said second axis while engaged with said drive gear;

at least one second gear group which contains a driven gear fixed on said second axis; and

a torque transferring mechanism for transferring torque ~~provided~~ between said driven gear of said first gear group which can run idle with respect to said second axis, and said driven gear of said second gear group which is fixed on said second axis;

wherein torque is transferred from said first axis to said second axis with said torque transferring mechanism.

61. (Currently amended) An automatic transmission comprising:

a first axis for inputting power;

a second axis for outputting a driving force source;

at least one first gear group which consists of a drive gear fixed on said first axis, and a driven gear provided so as to engage or run idle with respect to said second axis while engaged with said drive gear;

cont. C1

at least one second gear group which contains a driven gear fixed on said second axis;

wherein shifting is performed by switching a torque transferring mode from one mode, such that the torque is transferred from said first axis to said second axis with said first gear group or said second gear group, to the other mode, such that the torque is transferred from said first axis to said second axis with another first gear group different from said first gear group used in the former transferring mode or another second gear group different from said second gear group used in the former transferring mode; and

a torque transferring mechanism for transferring torque provided between said driven gear of said first gear group which can run idle with respect to said second axis and said driven gear of said second gear group which is fixed on said second axis,

wherein torque is transferred from said first axis to said second axis with said torque transferring mechanism while shifting.

cont. C1